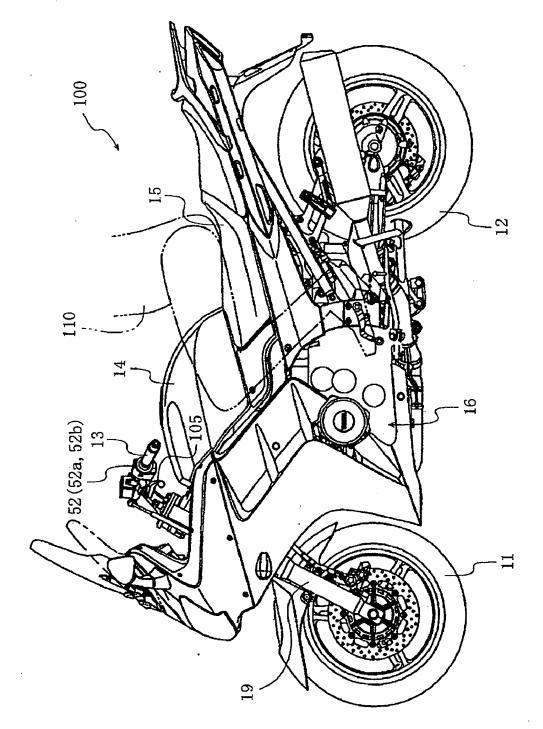
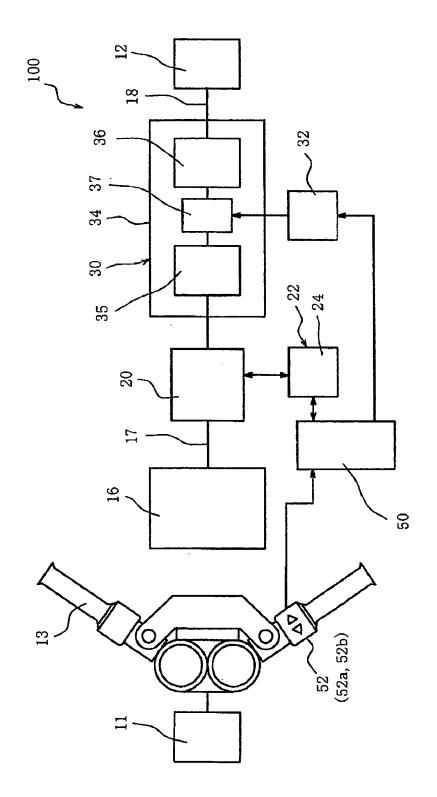
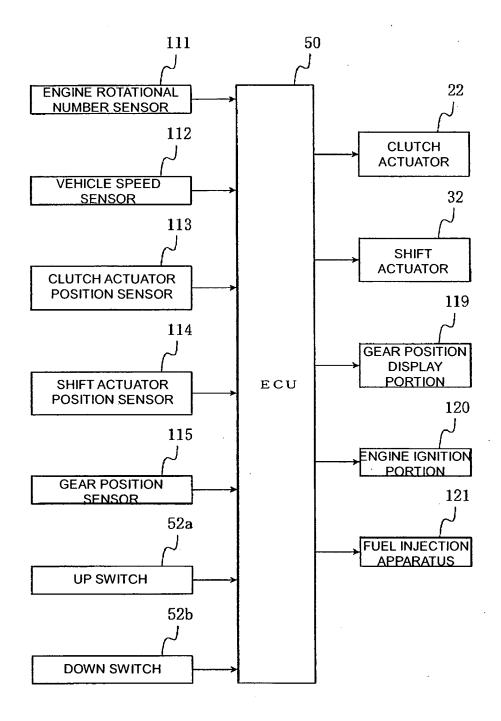
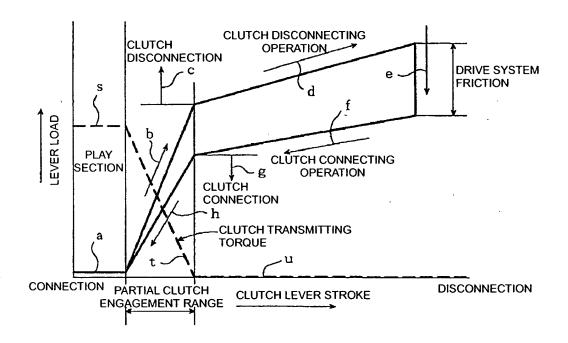
[Fig. 1]

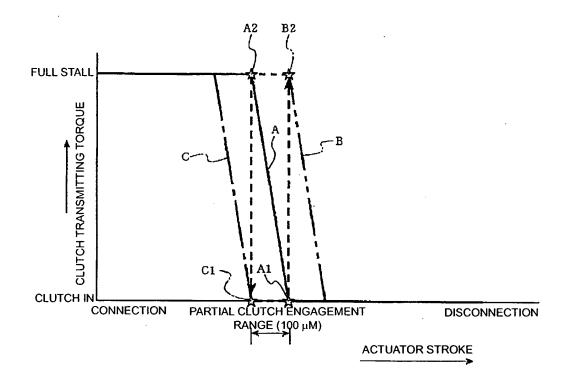


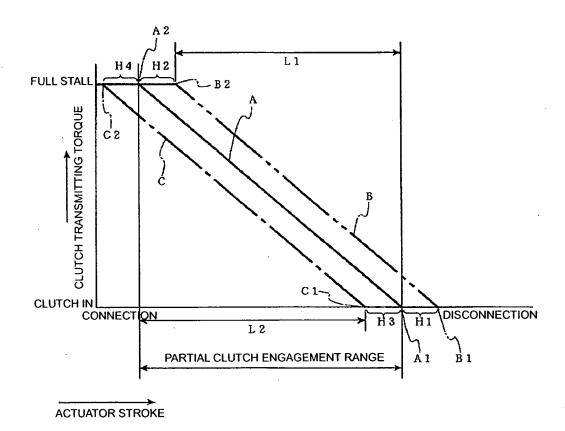
[Fig. 2]

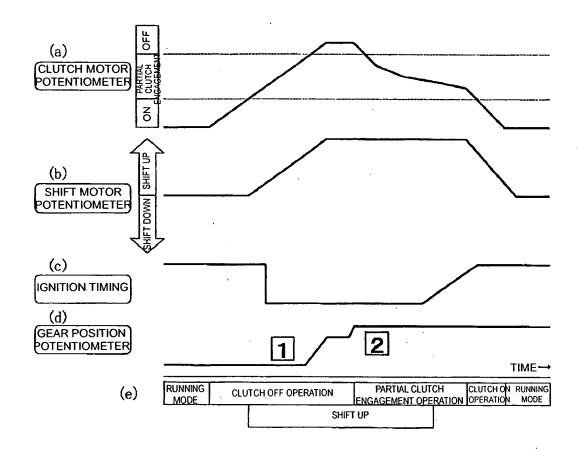




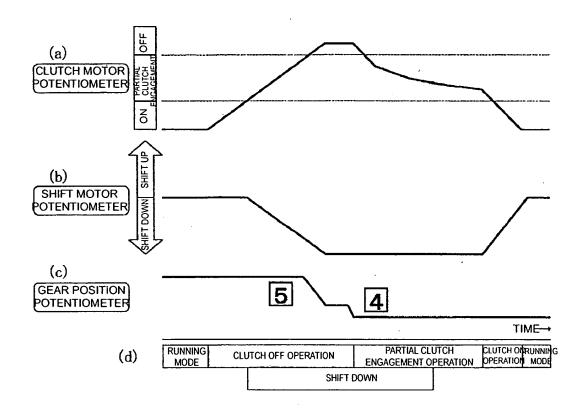




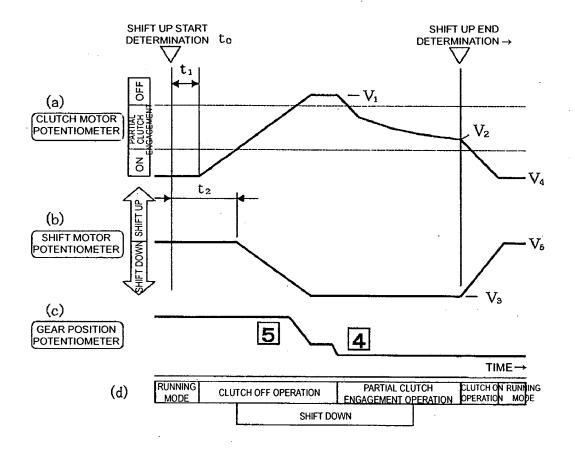


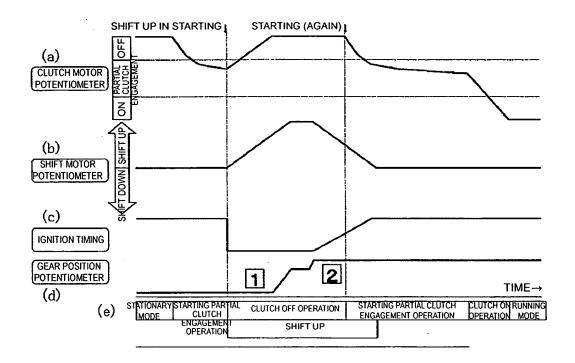


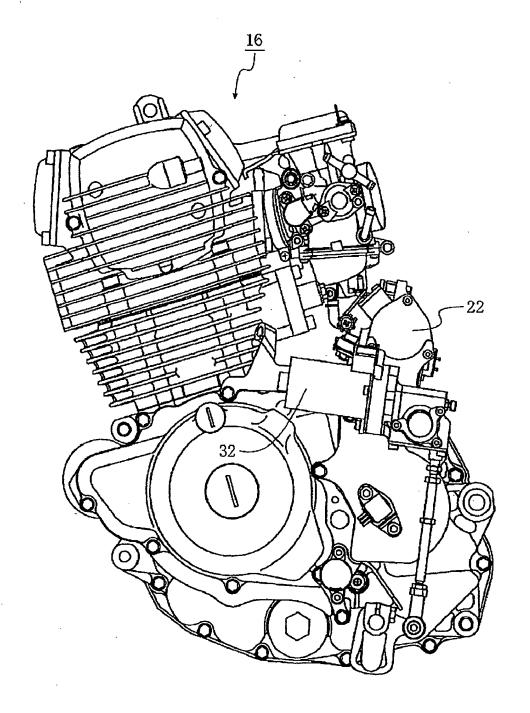
[Fig. 8]

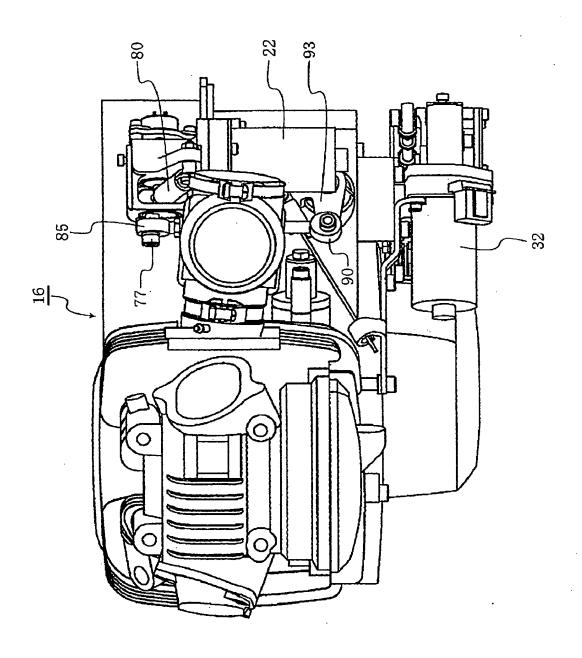


[Fig. 9]

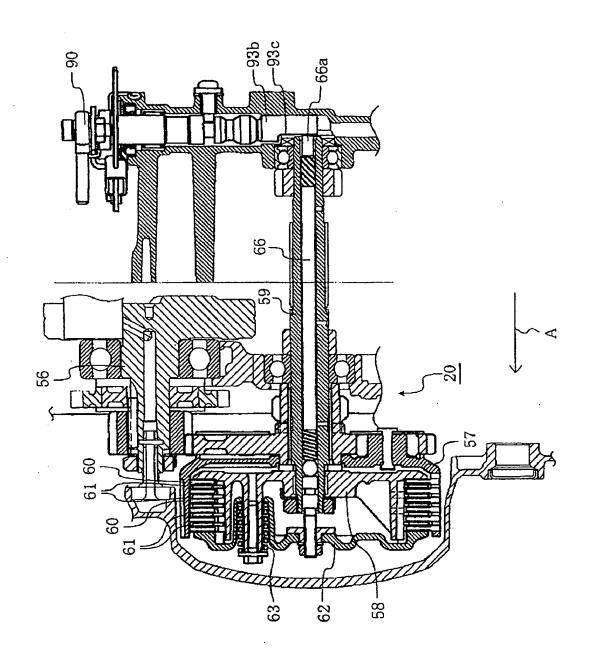




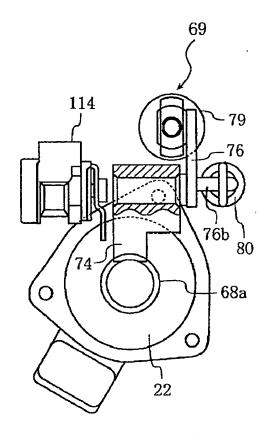




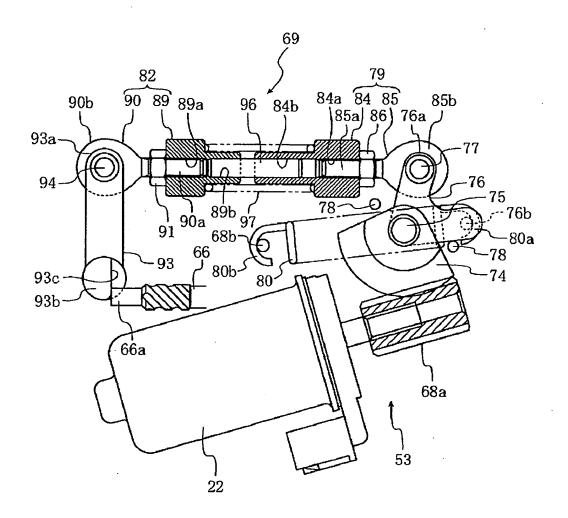
[Fig. 13]



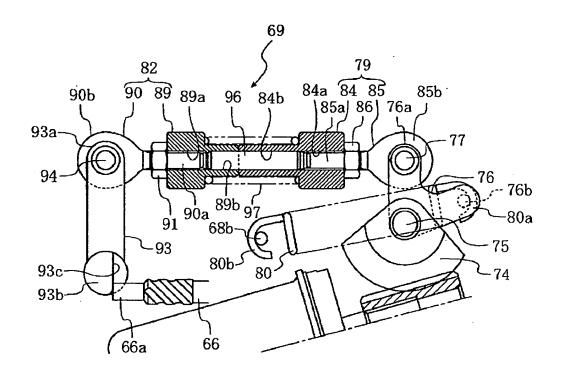
[Fig. 14]

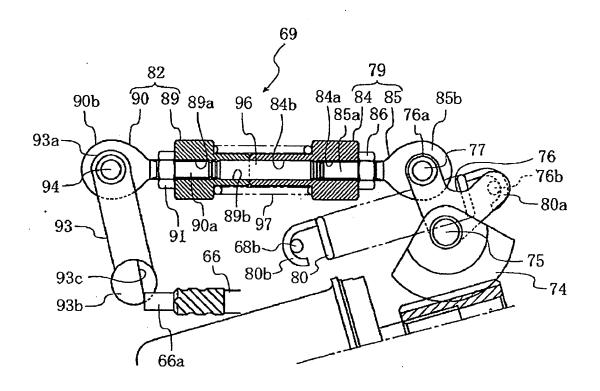


[Fig. 15]

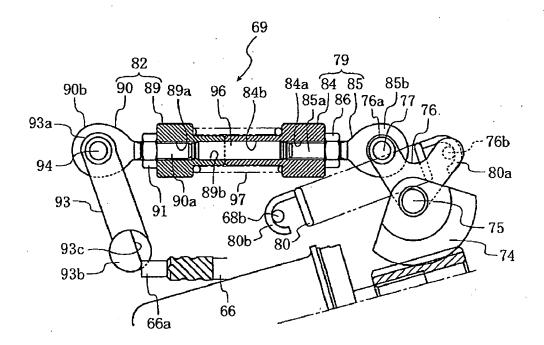


[Fig. 16]

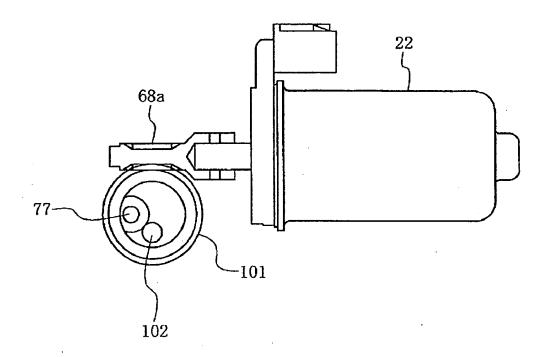




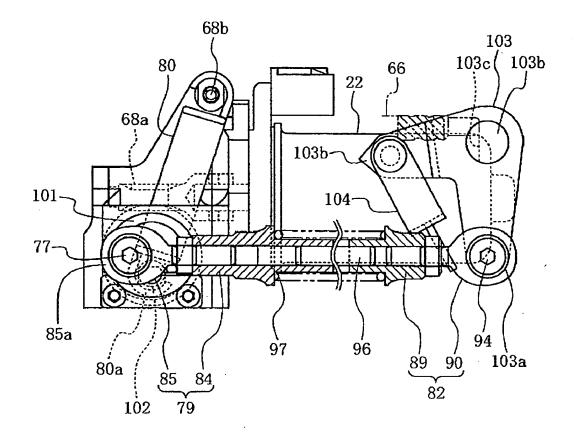
[Fig. 18]



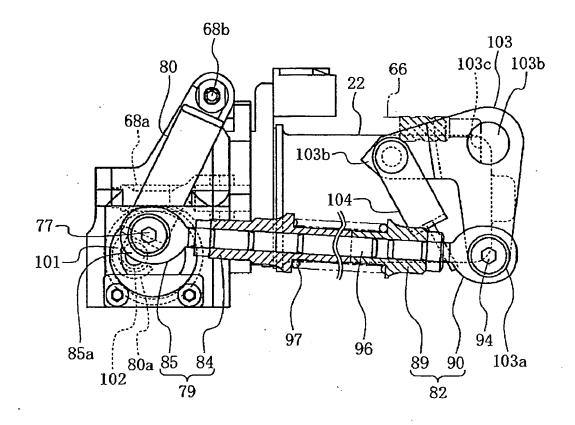
[Fig. 19]

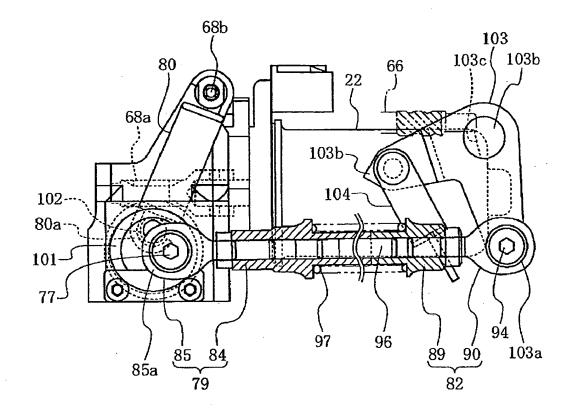


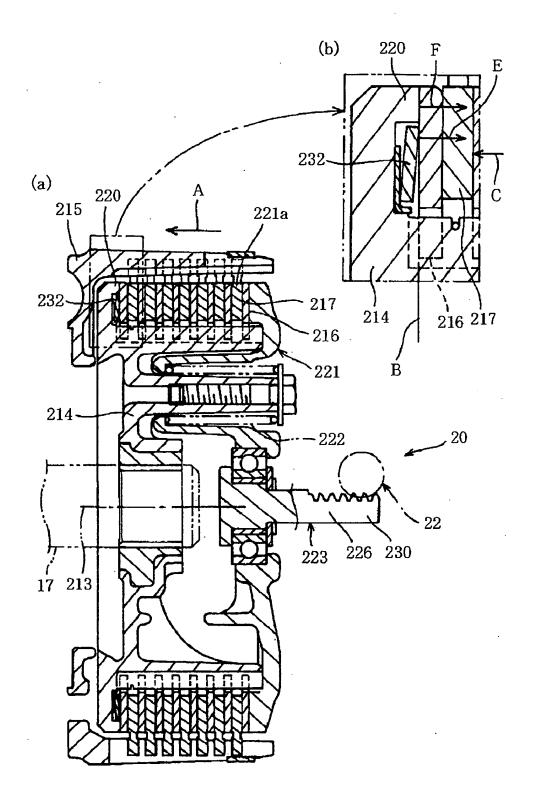
[Fig. 20]

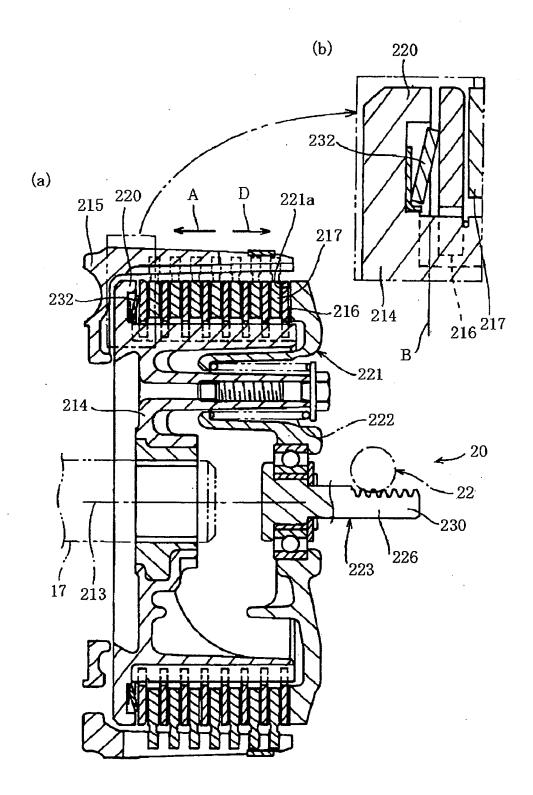


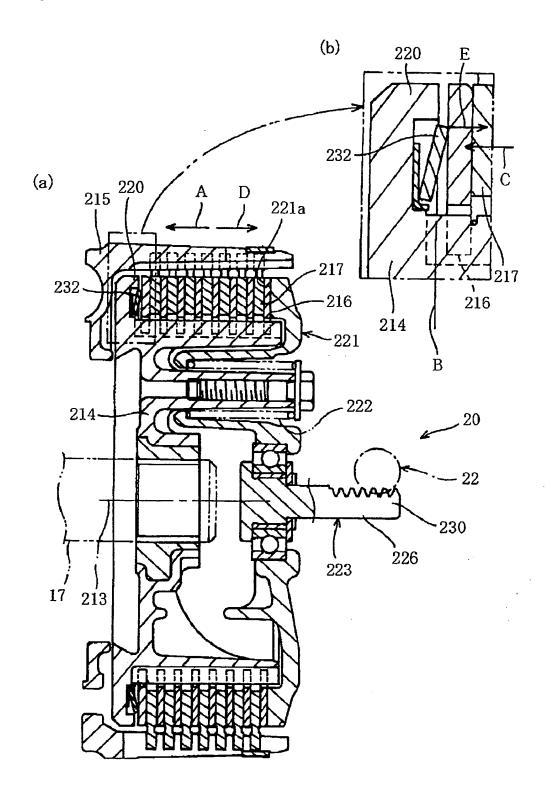
[Fig. 21]











[FIG. 3]

- 111 ENGINE ROTATIONAL NUMBER SENSOR
- 112 VEHICLE SPEED SENSOR
- 113 CLUTCH ACTUATOR POSITION SENSOR
- 114 SHIFT ACTUATOR POSITION SENSOR
- 115 GEAR POSITION SENSOR
- 52a UP SWITCH
- 52b DOWN SWITCH
- 22 CLUTCH ACTUATOR
- 32 SHIFT ACTUATOR
- 119 GEAR POSITION DISPLAY PORTION
- 120 ENGINE IGNITION PORTION
- 121 FUEL INJECTION APPARATUS

[FIG. 4]

CLUTCH LEVER STROKE

CONNECTION

DISCONNECTION

PARTIAL CLUTCH ENGAGEMENT RANGE

LEVER LOAD

PLAY SECTION

CLUTCH DISCONNECTION

CLUTCH DISCONNECTING OPERATION

CLUTCH CONNECTING OPERATION

DRIVE SYSTEM FRICTION

CLUTCH CONNECTION

CLUTCH TRANSMITTING TORQUE [FIG. 5] ACTUATOR STROKE CONNECTION DISCONNECTION PARTIAL CLUTCH ENGAGEMENT RANGE (100 µM) CLUTCH TRANSMITTING TORQUE FULL STALL CLUTCH IN [FIG. 6] ACTUATOR STROKE CONNECTION DISCONNECTION PARTIAL CLUTCH ENGAGEMENT RANGE CLUTCH TRANSMITTING TORQUE FULL STALL CLUTCH IN [FIG. 7] (a) CLUTCH MOTOR POTENTIOMETER ON PARTIAL CLUTCH ENGAGEMENT OFF

(b)

SHIFT MOTOR POTENTIOMETER

SHIFT UP SHIFT DOWN (c) IGNITION TIMING (d) GEAR POSITION POTENTIOMETER (e) TIME RUNNING MODE CLUTCH OFF OPERATION PARTIAL CLUTCH ENGAGEMENT OPERATION CLUTCH ON OPERATION RUNNING MODE SHIFT UP [FIG. 8] (a) CLUTCH MOTOR POTENTIOMETER ON PARTIAL CLUTCH ENGAGEMENT OFF (b) SHIFT MOTOR POTENTIOMETER SHIFT UP . SHIFT DOWN

(c)

GEAR POSITION POTENTIOMETER (d) TIME RUNNING MODE CLUTCH OFF OPERATION PARTIAL CLUTCH ENGAGEMENT OPERATION CLUTCH ON OPERATION RUNNING MODE SHIFT DOWN [FIG. 9] (a) CLUTCH MOTOR POTENTIOMETER ON PARTIAL CLUTCH ENGAGEMENT OFF SHIFT UP START DETERMINATION SHIFT UP END DETERMINATION (b) SHIFT MOTOR POTENTIOMETER SHIFT UP SHIFT DOWN (c) GEAR POSITION POTENTIOMETER

(d)

TIME

RUNNING MODE CLUTCH OFF OPERATION PARTIAL CLUTCH ENGAGEMENT OPERATION CLUTCH ON OPERATION RUNNING MODE SHIFT DOWN [FIG. 10] (a) CLUTCH MOTOR POTENTIOMETER ON PARTIAL CLUTCH ENGAGEMENT OFF SHIFT UP IN STARTING STARTING (AGAIN) (b) SHIFT MOTOR POTENTIOMETER SHIFT UP SHIFT DOWN (c) IGNITION TIMING (d) GEAR POSITION POTENTIOMETER

(e)

TIME

STATIONARY MODE

STARTING PARTIAL CLUTCH ENGAGEMENT OPERATION

CLUTCH OFF OPERATION

STARTING PARTIAL CLUTCH ENGAGEMENT OPERATION

CLUTCH ON OPERATION

RUNNING MODE

SHIFT UP

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